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Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=9; day=2; hr=15; min=22; sec=58; ms=346;]

=====

Reviewer Comments:

<210> 28

<211> 141

<212> DNA

<213> Rattus norvegicus nucleotide sequence encoding the LIMP II Transmembrane cytoplasmic domain

<400> 28

The above <212> response: 1) exceeds the Sequence Rules' required 72-character line limit; 2) contains invalid elements. Per 1.823 of the Sequence Rules, indicate only the Genus species of the organism: any explanatory material goes in the <220>-<223> section. This type of response appears in many sequences in the submitted file. Although accepted earlier, these responses need to be corrected.

<210> 52

<211> 38

<212> PRT

<213> Mus musculus LAMP-1 transmembrane & cytoplasmic domain

<220>

<221> MISC_FEATURE

<222> (38)..(38)

<223> Xaa = Amber stop codon as translated from the nucleotide codon "tag" as listed at the 3' end of SEQ ID NO: 5

<400> 52

Asn Met Leu Ile Pro Ile Ala Val Gly Gly Ala Leu Ala Gly Leu Val

1 5 10 15

Leu Ile Val Leu Ile Ala Tyr Leu Ile Gly Arg Lys Arg Ser His Ala
20 25 30

Gly Tyr Gln Thr Ile Xaa
35

The above <213> response needs correction, as indicated in the first example. Also, "Xaa" cannot represent a stop codon: "Xaa" can only represent a single amino acid.

Application No: 10526120 Version No: 3.0

Input Set:

Output Set:

Started: 2008-07-29 15:02:16.846
Finished: 2008-07-29 15:02:19.001
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 155 ms
Total Warnings: 52
Total Errors: 0
No. of SeqIDs Defined: 52
Actual SeqID Count: 52

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| W 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (3) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (4) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (5) |
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| W 402 | Undefined organism found in <213> in SEQ ID (7) |
| W 402 | Undefined organism found in <213> in SEQ ID (8) |
| W 402 | Undefined organism found in <213> in SEQ ID (9) |
| W 402 | Undefined organism found in <213> in SEQ ID (10) |
| W 402 | Undefined organism found in <213> in SEQ ID (11) |
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| W 402 | Undefined organism found in <213> in SEQ ID (13) |
| W 402 | Undefined organism found in <213> in SEQ ID (14) |
| W 402 | Undefined organism found in <213> in SEQ ID (15) |
| W 402 | Undefined organism found in <213> in SEQ ID (16) |
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| W 402 | Undefined organism found in <213> in SEQ ID (19) |
| W 402 | Undefined organism found in <213> in SEQ ID (20) |

Input Set:

Output Set:

Started: 2008-07-29 15:02:16.846
Finished: 2008-07-29 15:02:19.001
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Total Warnings: 52
Total Errors: 0
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Actual SeqID Count: 52

| Error code | Error Description |
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| W 402 | Undefined organism found in <213> in SEQ ID (22) |
| W 402 | Undefined organism found in <213> in SEQ ID (23) |
| W 402 | Undefined organism found in <213> in SEQ ID (24) |
| W 402 | Undefined organism found in <213> in SEQ ID (25) |
| W 402 | Undefined organism found in <213> in SEQ ID (26) This error has occurred more than 20 times, will not be displayed |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (49) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (50) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (51) |

SEQUENCE LISTING

<110> National University of Singapore
Chua, Kaw Yan
Liew, Lip Nyin

<120> Recombinant Nucleic Acid Useful for Inducing Protective Immune
Response Against Allergens

<130> 11747.105002 NUS002

<140> 10526120

<141> 2005-07-14

<150> PCT/SG03/00205

<151> 2003-08-29

<160> 52

<170> PatentIn version 3.4

<210> 1

<211> 216

<212> DNA

<213> Artificial

<220>

<223> synthetic oligonucleotide encoding for the leader sequence, the
transmembrane and cytoplasmic tail of Mus musculus LAMP-1,
containing Nhe I site 3' of the LAMP-1 leader sequence and Nde I
site 5' of the LAMP-1 transmembrane and cytop

<400> 1

ctcgagccac catggcgccc cccggcgccc ggagggccct gctcctgctg ctgctggcag 60

gccttgacaca tggcgctagc gaattcccgg ggatccatat gttgatcccc attgctgtgg 120

gcggtgcctt ggcagggctg gtcctcatcg tcctcatcgc ctacctcatt ggcaggaaga 180

ggagtcacgc cggctatcag accatctagc ggccgc 216

<210> 2

<211> 234

<212> DNA

<213> Artificial

<220>

<223> chimeric gene that encodes the Mus musculus LAMP-1 leader
sequence, the Blo t5 gene fragment for the H-2d-restricted Th
epitope and the Mus musculus LAMP-1 transmembrane and cytoplasmic
domain

<400> 2

atggccgccc cggcgcccg gagggccctg ctctgctgc tgctggcagg ccttgacat 60

| | |
|--|-----|
| ggcgctagcg cagaattgca agagaaaatc attcgagaac ttgatgttgt ttgcgccatg | 120 |
| aatatgttga tccccattgc tgtggggcggg gccctggcag ggctggtcct catcgtcctc | 180 |
| attgcctacc tcattggcag gaagaggagt cacgccggct atcagaccat ctag | 234 |

<210> 3
 <211> 534
 <212> DNA
 <213> Artificial

<220>
 <223> chimeric gene that encodes the Mus musculus LAMP-1 leader sequence, the entire Blo t 5 gene product and the Mus musculus LAMP-1 transmembrane and cytoplasmic domain

| | |
|--|-----|
| <400> 3 | |
| atggcgcgcc cgggcgcgcc gagggccctg ctctgctgc tgctggcagg ccttgacat | 60 |
| ggcgctagcc aagagcacia gccaaagaag gatgatttcc gaaacgaatt cgatcacttg | 120 |
| ttgatcgaac aggcaaacca tgctatcgaa aaggggagaac atcaattgct ttacttgcaa | 180 |
| caccaactcg acgaattgaa tgaaaacaag agcaaggaat tgcaagagaa aatcattcga | 240 |
| gaacttgatg ttgtttgctg catgatcgaa ggagcccaag gagctttgga acgtgaattg | 300 |
| aagcgaactg atcttaacat tttggaacga ttcaactacg aagaggctca aactctcagc | 360 |
| aagatcttgc ttaaggattt gaaggaaacc gaacaaaaag tgaaggatat tcaaacccaa | 420 |
| aatatgttga tccccattgc tgtggggcggg gccctggcag ggctggtcct catcgtcctc | 480 |
| atgcctacc tcattggcag gaagaggagt cacgccggct atcagaccat ctag | 534 |

<210> 4
 <211> 420
 <212> DNA
 <213> Artificial

<220>
 <223> chimeric gene that encodes the Mus musculus LAMP-1 leader sequence and the entire Blo t 5 gene product

| | |
|--|-----|
| <400> 4 | |
| atggcgcgcc cgggcgcgcc gagggccctg ctctgctgc tgctggcagg ccttgacat | 60 |
| ggcgctagcc aagagcacia gccaaagaag gatgatttcc gaaacgaatt cgatcacttg | 120 |
| ttgatcgaac aggcaaacca tgctatcgaa aaggggagaac atcaattgct ttacttgcaa | 180 |
| caccaactcg acgaattgaa tgaaaacaag agcaaggaat tgcaagagaa aatcattcga | 240 |
| gaacttgatg ttgtttgctg catgatcgaa ggagcccaag gagctttgga acgtgaattg | 300 |

aagcgaactg atcttaacat ttggaacga ttcaactacg aagaggctca aactctcagc 360

aagatcttgc ttaaggattt gaaggaaacc gaacaaaaag tgaaggatat tcaaacccaa 420

<210> 5

<211> 849

<212> DNA

<213> Artificial

<220>

<223> chimeric gene that encodes the Mus musculus LAMP-1 leader sequence, the entire Der p 1 gene product and the Mus musculus LAMP-1 transmembrane and cytoplasmic domain

<400> 5

atggcgcgcc cggcgcccg gaggccctg ctctgctgc tgctggcagg ccttgccat 60

ggcgctagca ctaacgcctg cagtatcaat ggaaatgctc cagctgaaat cgatttgca 120

caaatgcgaa ctgtcactcc cattcgtatg caaggaggct gtgggtcatg ttgggctttc 180

tctggtgttg ccgcaactga atcagcttat ttggcttacc gtaatcaatc attggatctt 240

gctgaacaag aattagtcga ttgtgcttcc caacacgggt gtcattgtga taccattcca 300

cgtggtattg aatacatcca acataatggg gtcgtccaag aaagctacta tcgatacgtt 360

gcacgagaac aatcatgccg acgaccaaatt gcacaacggt tcggtatctc aaactattgc 420

caaatttacc caccaaattg aaacaaaatt cgtgaagctt tggctcaaac ccacagcgct 480

attgccgtca ttattggcat caaagattta gacgcattcc gtcattatga tggccgaaca 540

atcattcaac gcgataatgg ttaccaacca aactatcacg ctgtcaacat tgttggttac 600

agtaacgcac aagggtgcga ttattggatc gtacgaaaca gttgggatac caattggggt 660

gataatggtt acggttatit tgctgccaac atcgatttga tgatgattga agaatatcca 720

tatgttgtca ttctcaatat gttgatcccc attgctgtgg gcggtgccct ggcagggctg 780

gtctcatcg tctcatcgc ctacctcatt ggcaggaaga ggagtcacgc cggctatcag 840

accatctag 849

<210> 6

<211> 879

<212> DNA

<213> Artificial

<220>

<223> chimeric gene that encodes the Homo sapiens tissue plasminogen activator leader sequence, the entire Der p 1 gene product and the Mus musculus LAMP-1 transmembrane and cytoplasmic domain

<400> 6

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atggatgcaa tgaagagagg gctctgctgt gtgctgctgc tgtgtggagc agtcttcgtt      60
tcgcccagcc aggttgggtgt gcaggacccc tgtgtcccgc ccctcaccaa cgcctgcagc      120
atcaacggca atgccccgcg tgagattgat ctgcgccaga tgaggaccgt gactcccatc      180
cgcattgcaag gcggctgcgg gtcttggttg gccttctcag gcgtggccgc gaccgagtct      240
gcatacctcg cgtatcggaa tcagagcctg gacctcgtcg agcaggagct cgttgactgc      300
gcctcccaac acggatgtca tggggatacg attcccagag gtatcgaata catccagcat      360
aatggcgtcg tgcaggaaag ctattaccga tacgtagcta gggagcagtc ctgccgccgt      420
cctaacgccc agcgcttcgg catttccaac tattgccaga tctaccccc taatgtgaac      480
aagatcaggg aggccttggc gcagacgcac agcgccatcg ctgtcatcat cggaatcaag      540
gatctggacg cattccggca ctatgacggg cgcacaatca tccagcgcga caacggatac      600
cagccaaact atcacgcggt caacatcgtg ggttactcga acgccaggg ggtggactac      660
tggatcgtgc ggaacagttg ggacaccaac tggggcgaca acggctacgg ctactttgcc      720
gccaacatcg acctgatgat gatcgaagag taccgcgtacg tggatgatcct gttgatcccc      780
attgctgtgg gcggtgccct ggcagggctg gtctcctcgc tctcattgc ctacctcatt      840
ggcaggaaga ggagtcacgc cggctatcag accatctag                                879

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<210> 7
 <211> 26
 <212> PRT
 <213> Rattus norvegicus LIMP II Leader peptide

<400> 7

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Met Ala Arg Cys Cys Phe Tyr Thr Ala Gly Thr Leu Ser Leu Leu Leu
1           5           10          15

Leu Val Thr Ser Val Thr Leu Leu Val Ala
           20          25

```

<210> 8
 <211> 46
 <212> PRT
 <213> Rattus norvegicus LIMP II Transmembrane cytoplasmic domain

<400> 8

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Leu Ile Val Thr Asn Ile Pro Tyr Ile Ile Met Ala Leu Gly Val Phe
1           5           10          15

```


Phe Gly Leu Ile Phe Thr Trp Leu Ala Cys Arg Gly Gln Gly Ser Thr
20 25 30

Asp Glu Gly Thr Ala Asp Glu Arg Ala Pro Leu Ile Arg Thr
35 40 45

<210> 9
<211> 26
<212> PRT
<213> Homo sapiens LIMP II Leader peptide

<400> 9

Met Gly Arg Cys Cys Phe Tyr Thr Ala Gly Thr Leu Ser Leu Leu Leu
1 5 10 15

Leu Val Thr Ser Val Thr Leu Leu Val Ala
20 25

<210> 10
<211> 46
<212> PRT
<213> Homo sapiens LIMP II Transmembrane cytoplasmic domain

<400> 10

Leu Ile Ile Thr Asn Ile Pro Tyr Ile Ile Met Ala Leu Gly Val Phe
1 5 10 15

Phe Gly Leu Val Phe Thr Trp Leu Ala Cys Lys Gly Gln Gly Ser Met
20 25 30

Asp Glu Gly Thr Ala Asp Glu Arg Ala Pro Leu Ile Arg Thr
35 40 45

<210> 11
<211> 26
<212> PRT
<213> Mus musculus LIMP II Leader peptide

<400> 11

Met Gly Arg Cys Cys Phe Tyr Thr Ala Gly Thr Leu Ser Leu Leu Leu
1 5 10 15

Leu Val Thr Ser Val Thr Leu Leu Val Ala
20 25

<210> 12
<211> 46
<212> PRT
<213> Mus musculus LIMP II Transmembrane cytoplasmic domain

<400> 12

Leu Val Val Thr Asn Ile Pro Tyr Ile Ile Met Ala Leu Gly Val Phe
1 5 10 15

Phe Gly Leu Val Phe Thr Trp Leu Ala Cys Arg Gly Gln Gly Ser Met
20 25 30

Asp Glu Gly Thr Ala Asp Glu Arg Ala Pro Leu Ile Arg Thr
35 40 45

<210> 13
<211> 27
<212> PRT
<213> Homo sapiens DEC-205 Leader peptide

<400> 13

Met Arg Thr Gly Trp Ala Thr Pro Arg Arg Pro Ala Gly Leu Leu Met
1 5 10 15

Leu Leu Phe Trp Phe Phe Asp Leu Ala Glu Pro
20 25

<210> 14
<211> 56
<212> PRT
<213> Homo sapiens DEC-205 Transmembrane cytoplasmic domain

<400> 14

Tyr Thr Ala Ile Ala Ile Ile Val Ala Thr Leu Ser Ile Leu Val Leu
1 5 10 15

Met Gly Gly Leu Ile Trp Phe Leu Phe Gln Arg His Arg Leu His Leu
20 25 30

Ala Gly Phe Ser Ser Val Arg Tyr Ala Gln Gly Val Asn Glu Asp Glu
35 40 45

Ile Met Leu Pro Ser Phe His Asp
50 55

<210> 15
<211> 27
<212> PRT
<213> Mus musculus DEC-205 Leader peptide

<400> 15

Met Arg Thr Gly Arg Val Thr Pro Gly Leu Ala Ala Gly Leu Leu Leu
1 5 10 15

Leu Leu Leu Arg Ser Phe Gly Leu Val Glu Pro
20 25

<210> 16
<211> 56
<212> PRT
<213> Mus musculus DEC-205 Transmembrane cytoplasmic domain

<400> 16

Tyr Thr Gly Ile Ala Ile Leu Phe Ala Val Leu Cys Leu Leu Gly Leu
1 5 10 15

Ile Ser Leu Ala Ile Trp Phe Leu Leu Gln Arg Ser His Ile Arg Trp
20 25 30

Thr Gly Phe Ser Ser Val Arg Tyr Glu His Gly Thr Asn Glu Asp Glu
35 40 45

Val Met Leu Pro Ser Phe His Asp
50 55

<210> 17
<211> 41
<212> PRT
<213> Homo sapiens P-selectin Leader peptide

<400> 17

Met Ala Asn Cys Gln Ile Ala Ile Leu Tyr Gln Arg Phe Gln Arg Val
1 5 10 15

Val Phe Gly Ile Ser Gln Leu Leu Cys Phe Ser Ala Leu Ile Ser Glu
20 25 30

Leu Thr Asn Gln Lys Glu Val Ala Ala
35 40

<210> 18
<211> 59
<212> PRT
<213> Homo sapiens P-selectin Transmembrane cytoplasmic domain

<400> 18

Leu Thr Tyr Phe Gly Gly Ala Val Ala Ser Thr Ile Gly Leu Ile Met
1 5 10 15

Gly Gly Thr Leu Leu Ala Leu Leu Arg Lys Arg Phe Arg Gln Lys Asp
20 25 30

Asp Gly Lys Cys Pro Leu Asn Pro His Ser His Leu Gly Thr Tyr Gly
35 40 45

Val Phe Thr Asn Ala Ala Phe Asp Pro Ser Pro
50 55

<210> 19
<211> 17
<212> PRT
<213> Homo sapiens tyrosinase Leader peptide

<400> 19

Met Leu Leu Ala Val Leu Tyr Cys Leu Leu Trp Ser Phe Gln Thr Ser
1 5 10 15

Ala

<210> 20
<211> 30
<212> PRT
<213> Homo sapiens tyrosinase Transmembrane cytoplasmic domain

<400> 20

Cys Arg His Lys Arg Lys Gln Leu Pro Glu Glu Lys Gln Pro Leu Leu
1 5 10 15

Met Glu Lys Glu Asp Tyr His Ser Leu Tyr Gln Ser His Leu
20 25 30

<210> 21
<211> 24
<212> PRT

<213> Homo sapiens GLUT4 Leader peptide

<400> 21

Met Pro Ser Gly Phe Gln Gln Ile Gly Ser Glu Asp Gly Glu Pro Pro
1 5 10 15

Gln Gln Arg Val Thr Gly Thr Leu
20

<210> 22

<211> 43

<212> PRT

<213> Homo sapiens GLUT4 Transmembrane Cytoplasmic domain

<400> 22

Arg Val Pro Glu Thr Arg Gly Arg Thr Phe Asp Gln Ile Ser Ala Ala
1 5 10 15

Phe His Arg Thr Pro Ser Leu Leu Glu Gln Glu Val Lys Pro Ser Thr
20 25 30

Glu Leu Glu Tyr Leu Gly Pro Asp Glu Asn Asp
35 40

<210> 23

<211> 21

<212> PRT

<213> Rattus norvegicus endotubin Leader peptide

<400> 23

Met Cys Leu Pro Ser Cys Leu Leu Ser Ile Trp Val Leu Phe Met Ala
1 5 10 15

Ala Gln Ser Leu Gly
20

<210> 24

<211> 66

<212> PRT

<213> Rattus norvegicus endotubin Transmembrane Cytoplasmic domain

<400> 24

Ala Ala Pro Val Ser Val Pro Val Ala Val Gly Gly Ala Leu Leu Leu
1 5 10 15

Phe Leu Leu Leu Leu Gly Leu Gly Gly Trp His Trp Leu Gln Lys Gln
20 25 30

His Leu Pro Cys Gln Ser Thr Asp Ala Ala Ala Ser Gly Phe Asp Asn
35 40 45

Ile Leu Phe Asn Ala Asp Gln Val Thr Leu Pro Glu Ser Ile Thr Ser
50 55 60

Asn Pro
65

<210> 25
<211> 23
<212> PRT
<213> Mus musculus LAMP-1 leader peptide

<400> 25

Met Ala Ala Pro Gly Ala Arg Arg Pro Leu Leu Leu Leu Leu Ala
1 5 10 15

Gly Leu Ala His Gly Ala Ser
20

<210> 26
<211> 36
<212> PRT
<213> Mus musculus LAMP-1 transmembrane and cytoplasmic domain

<400> 26

Met Leu Ile Pro Ile Ala Val Gly Gly Ala Leu Ala Gly Leu Val Leu
1 5 10 15

Ile Val Leu Ile Ala Tyr Leu Ile Gly Arg Lys Arg Ser His Ala Gly
20 25 30

Tyr Gln Thr Ile
35

<210> 27
<211> 78
<212> DNA
<213> Rattus norvegicus nucleotide sequence encoding the LIMP II leader peptide

<400> 27
atggcccgat gctgcttcta cacggcgggg acactgtctc tgctgctgct ggtgaccagt 60

gtcacgctgc tagtggct

78

<210> 28

<211> 141

<212> DNA

<213> Rattus norvegicus nucleotide sequence encoding the LIMP II Transmembrane cytoplasmic domain

<400> 28

ttgattgtca ccaacatacc ctacatcatc atggcactgg gcgtgttctt tggcttgatt 60

ttcacgtggc tggcgtgtcg aggacagggg tctacggatg agggaaactgc agatgaaagg 120

gcacccctca tacggaccta a 141

<210> 29

<211> 78

<212> DNA

<213> Homo sapiens nucleotide sequence encoding the LIMP II Leader peptide

<400> 29

atggggccgat gctgcttcta cacggcgggg acgttgccc tgctcctgct ggtgaccagc 60

gtcacgctgc tgggtggcc 78

<210> 30

<211> 141

<212> DNA

<213> Homo sapiens nucleotide sequence encoding the LIMP II Transmembrane cytoplasmic domain

<400> 30

ttgatcatca ccaacatacc ctacatcatc atggcgctgg gtgtgttctt tggtttggtt 60

tttacctggc ttgcatgcaa aggacagggg tccatggatg agggaaacagc ggatgaaaga 120

gcacccctca ttggaaccta a 141

<210> 31

<211> 78

<212> DNA

<213> Mus musculus nucleotide sequence encoding the LIMP II Leader peptide

<400> 31

atgggcagat gctgcttcta cacggcgggg acgctgtctc tgctgctgct ggtgaccagc 60

gtcacgctgc tagtggct 78

<210> 32

<211> 141

<212> DNA

<213> Mus musculus nucleotide sequence encoding the LIMP II Transmembrane cytoplasmic domain

<400> 32
 ttggttggtca ccaacataacc ctacatcatt atggcactgg gtgtgttctt tggcttggtt 60
 ttcacgtggc tggcgtgtcg aggacagggg tctatggatg agggaactgc agatgaaaga 120
 gcaccctca tacgaaccta a 141

<210> 33
 <211> 81
 <212> DNA
 <213> Homo sapiens nucleotide sequence encoding the DEC-205 Leader peptide

<400> 33
 atgaggacag gctgggacgac ccctcgccgc ccggcggggc tctcatgct gctcttctgg 60
 ttcttcgatc tcgaggagcc c 81

<210> 34
 <211> 171
 <212> DNA
 <213> Homo sapiens nucleotide sequence encoding the DEC-205 Transmembrane cytoplasmic domain

<400> 34
 tacacagcaa tagctatcat agttgccaca ctaagtatct tagttctcat gggcggactg 60
 atttggttcc tcttccaaag gcaccgtttg cacctggcgg gtttctcatc agttcgatat 120
 gcacaaggag tgaatgaaga tgagattatg cttccttctt tccatgacta a 171

<210> 35
 <211> 81
 <212> DNA
 <213> Mus musculus nucleotide sequence encoding the DEC-205 leader peptide

<400> 35
 atgcggacgg gccgggtgac cccgggcctg gcggcggggc tactcctgct gttgctgcgg 60
 tccttcgggc ttgtggagcc t 81

<210> 36
 <211> 171
 <212> DNA
 <213> Mouse nucleotide sequence encoding the DEC-205 Transmembrane cytoplasmic domain

<400> 36
 tacacaggca tagccatcct gtttgccgtg ctgtgcctct tagggctcat cagcttggcg 60
 atttggttcc tcttgcaacg atcccatatc cgctggaccg gcttctctc ggttcggtat 120
 gaacatggaa